To Cabinet Ministers of HM Government

For whatever reason, the government is holding its cards too close to its chest and is failing to trust the public by offering up sufficient clarity about risks and transparency on its thinking on the key Covid-19 questions; so the government's overall strategy is insufficiently understood and trusted, particularly when changes in data, which inevitably continue to happen, lead to changes of approach.

Government communications seem to avoid telling people where risks are low or correcting over-estimation of the risk. There is reluctance to speak openly about how risks are being assessed and the trade-offs being made with other risks and economic impacts. The key questions aren't being articulated; much of the information to answer these questions, if the government has it, isn't being publicised. Current hypotheses as to what the answers are aren't being shared transparently enough with the public. It is also not clear to people what the government is doing to acquire the information it doesn't have, or how and when it expects to have answers. The lack of communication and transparency leads to lack of clarity about what progress the nation is making and what people can trust and do safely.

As many of us strive to help the public navigate risks we are experiencing acutely the need for higher quality, open and mature communications from government in order for society and individuals to manage this next phase. This would overcome the haphazard conclusions that people are only able to draw when they see car showrooms open but not schools or talk of getting the economy moving but not getting employees back to workplaces. Everyone needs to understand what government is trying to do and the relative significance of anything we individually can do - and how new information may alter that.

Transparency about the conclusions drawn from evidence would also help government to face the challenges of the coming months with a shared understanding across its own bodies, and with the organisations it relies on to implement policies, such as regulators, local authorities and trade bodies, as well as research groups who could address the gaps and the need for uniform data collection.

The following is an invitation to the government to share its reasoning, for a better conversation with the country about how to continue controlling the virus and resume economic and social activity.

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Cohorts and other factors

The current discussion
Covid-19 death rates are vastly different by age, from school-age children (1 in 2.5m) to people over 90 (1 in 51). The low risk to young people is not well publicised. The differences shown on the right (1) are essential for working out risks, as is an understanding that women are at significantly lower risk than men in every adult age group.

91% of covid deaths in England and Wales have been in people with known pre-existing conditions, higher for the oldest groups, slightly lower for under 45s (2). This also does not appear to be well-known.

Cases recorded by Public Health England (3) suggest a higher proportion of deaths in covid-positive white groups (81.9% of positive tests; 87.2% of deaths), but this may indicate more positive tests in young, healthy BAME populations. A study of 30,693 people admitted to 260 hospitals in Britain (4) reported that South Asian people had a risk of death 19% higher than white people (350/1000 vs 290/1000). No difference was found in other BAME groups. 40% of the South Asian patients had diabetes, making it a signficant contributory factor. Despite concern across the UK, the government isn't helping people understand what is known and not known.

It is not clear what other evidence is being considered by the government about possible ongoing effects of the disease on people who recover and whether serious disease may be more likely in some groups such as people who are vitamin D deficient.(5)

There are many studies underway to determine how long and how consistently people gain immunity, including whether asymptomatic people had sufficient viral dose to form antibodies. To determine whether a vaccine is effective, or what will happen in the next year without one, government will be modelling immunity in the population. The government denies thinking about herd immunity and yet it has to do so in order for everyone to understand the possible long term scenarios.

Age	Death registrations Eng & Wales (ONS to week of 12 June)	Covid death rate per population
<1	2	1 in 1,171,810
1-4	1	
5-9	0	1 in 2,386,367
10-14	3	
15-19	9	1 in 218,399
20-24	23	
25-29	48	1 in 66,102
30-34	78	
35-39	124	1 in 21,136
40-44	233	
45-49	438	
50-54	812	1 in 3,320
55-59	1,402	
60-64	1,985	
65-69	2,683	1 in 842
70-74	4,449	
75-79	6,422	
80-84	9,162	1 in 175
85-89	9,874	
90+	10,470	1 in 51
TOTAL	48,218	

Would government set out its answers for everybody on these issues:	1. What are the questions to be answered?	2. Why are they important? What policies might the answer affect?	3. What is known?	4. What don't we know? Do we have a hypothesis? What are the uncertainties?	5. What is being done to fill in the gaps?	6. How much of this has been communicated to the public?
Age/sex: who is most and least at risk						
Pre-existing conditions						
Ethnicity						
Vitamin D deficiency, male pattern baldness and other possible risk factors that have been identified in studies						
Immunity and long term effects						

Transmission and settings

The current discussion

The R number describes the rate at which the disease is spreading. It's of little use for people to gauge risk or impact. They need to know the prevalence of the disease in their area and what groups it's spreading in.

The Office for National Statistics is leading a monitoring survey randomly testing households to determine infection rates. It currently estimates 1 in 2200 people had the virus in the 2 weeks to 27 June (6). This helps people to see overall progress. Public Health England's Pillar 2 testing is where most new cases are recorded. The local detail needs to be publicised for people to assess risks, and for local bodies to assess activities and events.

There has been anxiety about the lowest risk activies, such as school and people at the beach on a sunny day, compared to the much greater risk of poorly ventilated indoor spaces. There are very few recorded cases of child to adult transmission globally. (7)

Some research has found just 0.3% of outbreaks resulting from outdoor transmission (8), and that sunlight UV appears to damage aerosol and surface borne virus rapidly. (9) On the other hand 40% of deaths in England and Wales have occurred in care homes (10) and NHS England estimated 10-20% of Covid-19 patients in hospital had acquired it there, later 5-7%. (11)

Would government set out its answers for everybody on these issues:

	1. What are the questions to be answered?	2. Why are they important? What policies might the answer affect?	3. What is known?	4. What don't we know? Do we have a hypothesis? What are the uncertainties?	5. What is being done to fill in the gaps?	6. How much of this has been communicated to the public?
Care homes						
Hospitals						
Schools						
Outdoors						
Indoors						
Outdoor events						
Social distancing effects						

Trade offs						
The current discussion GDP fell 20.4% in April (13). Forecasts are showing 10-15% for the year ahead. Modelling by HM Treasury of the costs of continuing different kinds of restrictions do not appear to have been published. No other models have been published to show the cost/benefit calculations the government is using for Covid-19 measures vs the economy, health, welfare and employment. The government has announced that its own staff will continue to work from home until 2021 and guidance is essential travel only. If the government has made projections - of the impact of working from home on business costs, receipts by the service industries, the impact on city economies or the sustainability of workplace costs being borne by the workforce in the medium to long term - these don't appear to have been published, and nor do analyses of impacts on vulnerable communities. The government has not indicated whether it is using any calculation of costs per fatality prevented or per Quality Adjusted Life Year, as its Green Book guidance suggests, or whether it considers monetisation not appropriate in this case.						

Would government set out its answers for everybody on these issues:						
	1. What are the questions to be answered?	2. Why are they important? To whom? What policies might the answer affect?	3. What is known?	4. What don't we know? Do we have a hypothesis? What are the uncertainties?	5. What is being done to fill in the gaps?	6. How much of this has been communicated to the public?
Economic impacts and effects on vulnerable communities						
Working from home vs decline in service industries, cities and employee conditions						
Cost per life saved vs other spending in health and social care						
Restriction of travel, work and activity vs employment						
Covid protection vs deaths from other causes						
Covid measures vs other impacts such as substance use, quality of life, mental health						
School closure vs effects on children and family						

Notes

(1) Preprint: https://www.medrxiv.org/content/10.1101/2020.04.08.20058578v4

(2) https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/deathsinvolvingcovid19englandandwales/deathsoccurringinmay2020#pre-existing-conditions-of-people-who-died-with-covid-19

(3) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/895344/COVID19_Weekly_Report_24_June.pdf

(4) https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3618215

(5) Preprint https://www.medrxiv.org/content/10.1101/2020.04.08.20058578v4

(6) https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/coronaviruscovid19infectionsurveypilot/2july2020

(7) Children are less likely to catch the virus and most likely to do so in their households. European Centre for Disease Prevention & Control. https://www.ecdc.europa.eu/en/covid-19/latest-evidence/transmission

(8) A study of 318 outbreaks in China found only one (0.3%) originated in an outdoor space (Qian et al medRxiv. 2020:2020.04.04.20053058 cited by ECDC 'Transmission of covid-19).

(9) In May 2020 Shanna et al reported in the Journal of Infectious Diseases that simulated UV from sunlight deactivates coronavirus on surfaces in 7-14 minutes. https://academic.oup.com/jid/advance-article/doi/10.1093/infdis/jiaa274/5841129. In the same journal in June 2020 Schuit et al found sunlight diminished aerosol virus 90% in 6 minutes, compared to 90% in 125 minutes with no sunlight. https://doi.org/10.1093/infdis/jiaa334

(10) 19,394 deaths in care homes E&W; 48,218 deaths https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/articles/deathsinvolvingcovid19inthecaresectorenglandandwales/deathsoccurringupto12june2020andregisteredupto20june2020provisional

(11) NHS England estimated 10-20% patients treated for covid-19 in hospital had acquired it while there for something else. When published by the Guardian in May, NHS England said it was 5-7% excluding a trust with infection control problems. These figures do not include people who contracted mild disease at hospital and went into the community. https://www.england.nhs.uk/statistics/statistical-work-areas/covid-19-daily-deaths/

(12) https://www.ons.gov.uk/economy/grossdomesticproductgdp/articles/coronavirusandtheimpactonoutputintheukeconomy/april2020